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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,449	01/16/2004	Chin-Jui Chang	65765-0085	7829
10291 7590 03/22/2007 RADER, FISHMAN & GRAUER PLLC 39533 WOODWARD AVENUE SUITE 140 BLOOMFIELD HILLS, MI 48304-0610			EXAMINER PATTERSON, MARC A	
			ART UNIT 1772	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/759,449

Applicant(s)

CHANG ET AL.

Examiner

Marc A. Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attac-

- 1) ☒ Notice of Discrepancies Cited (PTO-892)
- 2) ☐ Notice of Discrepancies Cited (PTO-892)
- 3) ☒ Information Disclosure Statement Drawing Review (PTO-948)  
Paper No(s)/Mail Date \_\_\_\_\_ (PTO/SB/08)

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PTOL-326 (Rev. 08-06)

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

tion Summary

Part of Paper No./Mail Date 20070319

### DETAILED ACTION

1. In view of the appeal brief filed on December 1, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

### NEW REJECTIONS

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7, 11 – 13, 19 and 23 – 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama et al (WO 97/294490; U.S. Patent No. 6,190,578 is used as translation).

With regard to Claim 1, Yokayama et al disclose a composition comprising 1 part by weight copper alloy powders and 0.5 to 250 parts by weight organic binder (column 4, lines 5 – 11); Yokayama et al therefore disclose a composition comprising 40% copper alloy powders by weight and 60% organic binder by weight. The organic binder comprises epoxy resin, and SBS block copolymer, in the amount of 1 to 250 parts by weight per 100 parts by weight of epoxy resin (column 8, lines 22 – 56); Yokayama et al therefore disclose a binder comprising equal amounts of epoxy resin and SBS, and therefore discloses a binder comprising 30% by weight of epoxy resin and 30% by weight of SBS block copolymer; because SBS block copolymer is a polystyrene and a rubber, Yokayama et al also disclose 24% by weight SBS, 5% by weight polystyrene and 1% by weight of a rubber. The claimed aspect of the composition being useful to form a reinforcing body is directed to an intended use, and is therefore given little patentable weight.

With regard to Claims 7 and 19, Yokayama et al disclose a 5% by weight of curing agent (column 9, lines 50 – 55).

With regard to Claims 11 – 13 and 23 – 27, a compressive strength of 1422 to 2129 psi. and a percent expansion of from 80 – 220% and from 95 – 200% and from 129 – 147% at a temperature of at least 300 degrees Fahrenheit are inherent to Yokayama et al, as Yokayama et al disclose a composition identical to the claimed composition.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4 – 6, 14, 16 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Wycech (U.S. Patent No. 5,755,486).

Yokoyama et al disclose a composition comprising a rubber as discussed above. With regard to Claims 2, 4 – 6, 14, 16 – 18, Yokoyama et al fail to disclose 0.5 - 10% of a pigment, 1 – 30% glass microspheres, 0.1 - 10% blowing agent and 0.5 - 5% catalyst by weight.

Wycech teaches a composition comprising 0.5 - 10% of a pigment (carbon black; column 6, lines 13 – 16), 1 – 30% glass microspheres (column 5, lines 58 - 65), 0.1 - 10% blowing agent (azodicarbonamide; column 5, lines 58 - 65), 0.5 – 5% accelerator (modified urea, therefore a catalyst; column 6, lines 13 – 16) and rubber (column 5, line 60) for the purpose of obtaining a composition having light weight and high strength characteristics (column 1, lines 12 – 15). One of ordinary skill in the art would therefore have recognized the advantage of providing for the additives of Wycech in Yokoyama et al, which comprises a composition comprising rubber, depending on the desired weight and strength of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 0.5 - 10% of a pigment, 1 – 30% glass microspheres, 0.1 - 10% blowing agent and 0.5 - 5% catalyst by weight in Yokoyama et al in

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order to obtain a composition having light weight and high strength characteristics as taught by Wycech.

6. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Wycech (U.S. Patent No. 5,755,486) and further in view of Kawasaki et al. (U.S. Patent No. 5,782,730).

Yokoyama et al and Wycech disclose a composition useful for forming a reinforcing body as discussed above; the composition comprises 3.55% fumed silica (column 6, lines 48 – 65 of Wycech). With regard to Claims 3 and 15, Yokoyama et al and Wycech fail to disclose a composition which comprises hydrated amorphous silica. Kawasaki teaches that hydrated amorphous silica is equivalent to fumed silica as a reinforcing agent for rubber, for the purpose of making a structural foam having good physical strength and hardness (column 6, lines 20 - 67; column 7, lines 1 - 43). The desirability of providing for hydrated amorphous silica in Yokoyama et al and Wycech, which is a structural foam, would therefore be obvious to one of ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for hydrated amorphous silica in Yokoyama et al and Wycech in order to make a structural foam having good physical strength and hardness as taught by Kawasaki.

7. Claims 8 – 9 and 20 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Wycech (U.S. Patent No. 5,755,486) and further in view of Rowland (U.S. Patent No. 4,692,475).

Yokoyama et al and Wycech disclose composition useful for forming a reinforcing body and comprising azodicarbonamide as a blowing agent as discussed above. With regard to Claims 8 – 9 and 20 – 21, Yokoyama et al and Wycech fail to disclose a composition comprising a compound for lowering the blowing temperature of the composition. Rowland teaches the use of a blowing agent composition comprising azodicarbonamide and zinc oxide; the zinc oxide is used as a composition for lowering the decomposition temperature of the azodicarbonamide, therefore lowering the blowing temperature of the composition (column 4, lines 49 – 59); the composition is used for the purpose of manufacturing foamed products at low temperature (column 1, lines 57 - 60). The desirability of providing for a composition for lowering the decomposition temperature in Yokoyama et al and Wycech, which is a foam, would therefore be obvious to one having ordinary skill in the art. It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a compound for lowering the blowing temperature of the composition in Yokoyama et al and Wycech in order to manufacture the foamed product at low temperature as taught by Rowland.

As to the claimed aspect of the compound for lowering the blowing temperature of the composition being present at 5% by weight, it would be obvious for one of ordinary skill in the art to vary the amount of blowing agent disclosed by Yokoyama et al and Wycech and therefore the amount of the compound for lowering the blowing temperature of the composition used) since the amount of blowing agent used would be readily determined through routine

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optimization by one having ordinary skill in the art depending on the desired end result. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

8. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Wycech (U.S. Patent No. 5,755,486) and Kawasaki et al. (U.S. Patent No. 5,782,730) and Rowland (U.S. Patent No. 4,692,475) and Bagga (U.S. Patent No. 5,021,513).

Yokoyama et al and Wycech, Kawasaki et al. and Rowland disclose a composition for forming a reinforcing body which comprises a pigment comprising carbon black, blowing agent comprising azodicarbamide, curing agent comprising dicyanamide and compound for lowering the blowing temperature of the composition comprising zinc oxide and catalyst comprising a modified urea as discussed above. With regard to Claims 10 and 22, Yokoyama et al and Wycech, Kawasaki et al. and Rowland fail to disclose a modified urea comprising dimethyl phenyl urea. Bagga teaches the use of dimethyl phenyl urea as a cure accelerator for epoxy compositions when dicyanamide is used as the curing agent (column 1, lines 24 - 44), for the purpose of forming a cured composition which has excellent storage stability (column 2, lines 10 - 26). The desirability of providing for a modified urea comprising dimethyl phenyl urea in Yokoyama et al and Wycech, Kawasaki et al. and Rowland, which is comprise epoxy, would therefore be obvious to one of ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for dimethyl phenyl urea in Yokoyama et al



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and Wycech, Kawasaki et al. and Rowland in order to forming a cured composition which has excellent storage stability as taught by Bagga.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc Patterson 3/12/07*

Marc A. Patterson, PhD.

Primary Examiner

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RENA DYE  
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